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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/623,434

07/17/2003

Yuli Zhou

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3547

21890

7590

09/03/2008

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PATENT DEPARTMENT  
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EXAMINER

HAMILTON, LALITA M

ART UNIT

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3691

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/623,434	<b>Applicant(s)</b> ZHOU ET AL.	
	<b>Examiner</b> Lalita M. Hamilton	<b>Art Unit</b> 3691	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 June 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### **Request for Continued Examination (RCE)**

The RCE filed on June 11, 2008 has been processed. A non-final follows.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There are steps missing in the claims. The independent claims do not follow fig.1 of the Applicant's drawing clearly detailing the steps of the invention.

#### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-29 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subjected matter.

Claims 1-13 and 22-25 recite a method. Based on Supreme Court precedent, a proper process must be tied to another statutory class or transform underlying subject matter to a different state or thing (*Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780,787-88 (1876)). Since neither of these requirements

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is met by the claim, the method is not considered a patent eligible process under 35 U.S.C. 101. To qualify as a statutory process, the claim should positively recite the other statutory class to which it is tied, for example by identifying the apparatus that accomplished the method steps or positively reciting the subject matter that is being transformed, for example by identifying the material that is being changed to a different state.

Claims 14-21 and 26-29 recite a system and router. The claims should incorporate hardware limitations in order to be considered statutory (ie processor).

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Kaminsky (7,356,498).

Kaminsky discloses an automated trading exchange and modification of quotes comprising receiving a trade order, receiving a quote that is generated from an algorithm engine that does not have access to the trade order, receiving quotes from a National Best Bid and Offer (NBBO) feed, analyzing quotes from algorithm engine and from and (NBBO) feed; selecting a marketplace for the trade order based on comparing

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the analyzed quotes to the trade order; and transmitting the trade order to the selected marketplace to be filled (col.7, line 35 to col.8, line 45; col.10, line 28 to col.12, line 10; and col.16, line 45 to col.17, line 2—receives quotes and determines whether the quote may be filled and where to send the quote to be filled); selecting the marketplace based on whether the trade order can be filled with improvement from the NBBO quote (col.7, line 35 to col.8, line 45; col.10, line 28 to col.12, line 10; and col.16, line 45 to col.17, line 2); the step of selecting the marketplace based on whether the improvement from the NBBO quote is one or more of size improvement and speed improvement (col.7, line 35 to col.8, line 45; col.10, line 28 to col.12, line 10; and col.16, line 45 to col.17, line 2); the selected marketplace is a reporting facility or a marketplace that can be used as a reporting facility (col.7, line 35 to col.8, line 45; col.10, line 28 to col.12, line 10; and col.16, line 45 to col.17, line 2); the selected marketplace is a reporting facility or a marketplace that can be used as a reporting facility (col.7, line 35 to col.8, line 45; col.10, line 28 to col.12, line 10; and col.16, line 45 to col.17, line 2); the algorithm engine is programmed to quote a predetermined improvement from the NBBO quote (col.7, line 35 to col.8, line 45; col.10, line 28 to col.12, line 10; and col.16, line 45 to col.17, line 2); the algorithm engine is programmed to quote a predetermined before the-trade-improvement from the NBBO quote (col.7, line 35 to col.8, line 45; col.10, line 28 to col.12, line 10; and col.16, line 45 to col.17, line 2); algorithm engine is programmed predetermined before the trade order is received to quote a predetermined improvement from the NBBO (col.7, line 35 to col.8, line 45; col.10, line 28 to col.12, line 10; and col.16, line 45 to col.17, line 2); receiving a trade order, receiving a quote from

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an algorithm engine that is generated without having access to the trade order,  
receiving a quote from a National Best Bid and Offer (NBBO) feed,  
analyzing the quotes received from the algorithm engine and a the (NBBO) feed,  
determining whether the trade order can be filled with improvement from  
the Offer (NBBO) quote based on comparing the algorithm engine and NBBO quotes to  
the trade order, and transmitting the trade order to one of (a) a marketplace where the  
trade order can be filled with improvement from the NBBO quote and (b) a  
marketplace where the trade order can be filled at the NBBO quote (col.7, line 35 to  
col.8, line 45; col.10, line 28 to col.12, line 10; and col.16, line 45 to col.17, line 2); the  
improvement is one or more of size improvement and speed improvement (col.7, line 35  
to col.8, line 45; col.10, line 28 to col.12, line 10; and col.16, line 45 to col.17, line 2); the  
marketplace where the trade order can be filled with improvement from the NBBO quote  
is a reporting facility or a marketplace that can be used as a reporting facility (col.7, line  
35 to col.8, line 45; col.10, line 28 to col.12, line 10; and col.16, line 45 to col.17, line 2);  
an order router, an National Best Bid and Offer (NBBO) feed, and an algorithm engine,  
wherein the order router is configured to: a) receive trade orders, b) receive quotes from  
the algorithm engine that are generated without access to the trade orders; c) receive  
quotes from the NBBO feed, d) analyze quotes received from the algorithm engine and  
the NBBO feed, e) determine whether the trade order can be filled with improvement  
from the NBBO quotes NBBO quote the trade order to the NBBO and algorithm engine  
quotes, and f) transmit the trade order to one of i) a marketplace where the trade order  
can be filled with improvement from the NBBO quote or ii) a marketplace where the

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trade order can be filled at the NBBO quote (col.7, line 35 to col.8, line 45; col.10, line 28 to col.12, line 10; and col.16, line 45 to col.17, line 2); a) analyze trade orders, quotes received from an algorithm engine that does not have knowledge of the trade orders, and a quotes received from a National Best Bid and Offer (NBBO) feed, b) determine whether the trade orders can be filled with improvement from the NBBO quotes based on comparing the trade order to the quotes from the algorithm engine and the NBBO feed, and c) transmit the trade orders to one of i) a marketplace where the trade order can be filled with improvement from the NBBO or ii) a marketplace where the trade order can be filled at the NBBO, (col.7, line 35 to col.8, line 45; col.10, line 28 to col.12, line 10; and col.16, line 45 to col.17, line 2); wherein the order router is further configured to: transmit the orders to a reporting facility or a marketplace that can be used as a reporting facility if the trade orders can be filled with improvement from the NBBO quotes (col.7, line 35 to col.8, line 45; col.10, line 28 to col.12, line 10; and col.16, line 45 to col.17, line 2); the algorithm engine is programmed to selectively generate quotes that provide a predetermined improvement from the NBBO quote (col.7, line 35 to col.8, line 45; col.10, line 28 to col.12, line 10; and col.16, line 45 to col.17, line 2); the algorithm engine is programmed to selectively generate quotes that provide non-predetermined improvement from the NBBO quote (col.7, line 35 to col.8, line 45; col.10, line 28 to col.12, line 10; and col.16, line 45 to col.17, line 2); wherein the algorithm engine is programmed to selectively generate quotes that provide a predetermined improvement from the NBBO quote (col.7, line 35 to col.8, line 45; col.10, line 28 to col.12, line 10; and

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col.16, line 45 to col.17, line 2); the algorithm engine is programmed to selectively generate quotes that provide non-predetermined improvement from the NBBO quote (col.7, line 35 to col.8, line 45; col.10, line 28 to col.12, line 10; and col.16, line 45 to col.17, line 2); the algorithm engine is programmed to selectively generate quotes that provide a predetermined improvement from the NBBO quotes (col.7, line 35 to col.8, line 45; col.10, line 28 to col.12, line 10; and col.16, line 45 to col.17, line 2); the algorithm engine is programmed to selectively generate quotes that provide non-predetermined improvement from the NBBO quotes (col.7, line 35 to col.8, line 45; col.10, line 28 to col.12, line 10; and col.16, line 45 to col.17, line 2); and the algorithm engine is programmed to selectively generate quotes that provide a predetermined and nonpredetermined improvement from the NBBO quotes (col.7, line 35 to col.8, line 45; col.10, line 28 to col.12, line 10; and col.16, line 45 to col.17, line 2).

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-29 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lalita M. Hamilton whose telephone number is (571) 272-6743. The examiner can normally be reached on Tuesday-Thursday (6:30-2:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kalinowski Alexander can be reached on (571) 272-6771. The fax phone



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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lalita M Hamilton/  
Primary Examiner, Art Unit 3691